

**Bob Dreisewerd**  
**Executive Vice President**



# BARON SERVICES – 5 COMPANIES IN ONE



- Leader in TV broadcast weather solutions
- #1 in creation of proprietary severe weather products



- #1 in TV broadcast weather radar
- NWS/FAA/DOD dual-polarization upgrade (NEXRAD)



- Leader in weather/air quality/pollution modeling
- Developer of next-generation hydrological/flood modeling



- #1 aviation weather service to the cockpit (XMWX)
- Satellite weather service to mariners/first responders (XMWX)



- #1 weather advisory service to automotive GPS units

# WHERE MIGHT I FIND XMWX WEATHER?

**ForeFlight**  
Intelligent Apps for Pilots™

**GARMIN**  
Digital Cyclone

**Rockwell  
Collins**

**JEPPESEN**



**GARMIN**

**BendixKing**  
by Honeywell



**Anywhere Map**

**Approach**  
systems inc

**ApproachView**

**CMC electronics**



**AVALEX**  
TECHNOLOGIES

**AVIDYNE**

**AvMAP**  
SATELLITE NAVIGATION

**BIG BAY**  
TECHNOLOGIES, INC.  
Marine Computer Solutions



**blue mountain avionics**

**C&E**  
Marine Group, LLC

**ADVANCED**  
FLIGHT SYSTEMS INC.

**FLIGHT DECK**  
RESOURCES



**DAC**  
INTERNATIONAL

**ESPRE Partners**  
MOBILE TECHNOLOGY

**MAPTECH**

**TELETYPE  
GPS**

**navAero**  
cockpit  
intelligence™



**IS** Innovative  
Solutions & Support

**ADAPCO**  
more in control™

Grand Rapids Technologies, Inc.

**InteliSea**

**Paperless Cockpit®**

**NAUTICOMP**

**SEATTLE  
AVIONICS**  
SOFTWARE



**vei**

**ROSEN**  
AVIATION

**GLOBALNAVSOURCE**

**PCAvionics**



**Sagem Avionics Inc.**  
SAIRAN Group

**NOBELTEC**

**BARON**  
SERVICES

# AIRFRAME MANUFACTURERS

**BOMBARDIER**



**Cessna**

A Textron Company



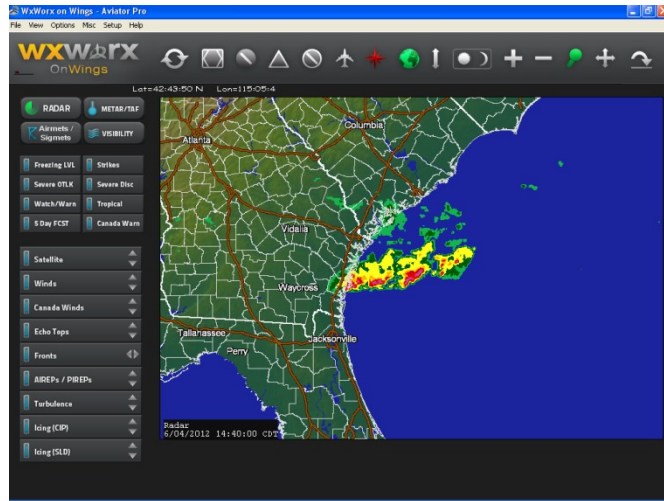
- Over 90% of new general/business aviation aircraft have avionics platforms that are compatible with XM WX service as:
  - Standard – Receiver and antenna are already built-in
  - Standard Option – Receiver and antenna must be purchased
    - Heads Up Technologies and Garmin manufacture the certified receivers
    - Baron Services manufactures non-certified/portable receivers for use with PC-based solutions, Honeywell devices, and various other devices (including iPad)
- **Device manufacturers choose which XMWX packages to support, which products they display on their device, and how to display the data (with guidelines provided by Baron)**

# XMWX RADAR DATA

- Radar mosaic created & transmitted every 5 minutes.
- Radar data at 2km resolution, 7 intensity levels (Reflectivity levels less than 10dbz are not provided).
- Mosaic is a max composite of all the single site base reflectivity elevation scans. This provides an indication of maximum intensity found within all elevation scans and not just the scan nearest the surface.
- Radar coverage information provided to alert users when radar site data is missing.
- Precipitation type mask applied to each radar update.
- Data quality controlled through automated algorithms and manually by meteorologists.
- Presentation guidelines provided by Baron Services, however, individual device manufacturers have latitude on presentation colors, smoothing of data, and which products are displayed with the radar data.

# RADAR DEPICTION ON VARIOUS DISPLAY DEVICES

## WXWORX ON WINGS



## FOREFLIGHT



## BENDIX KING AV80R



## GARMIN 696



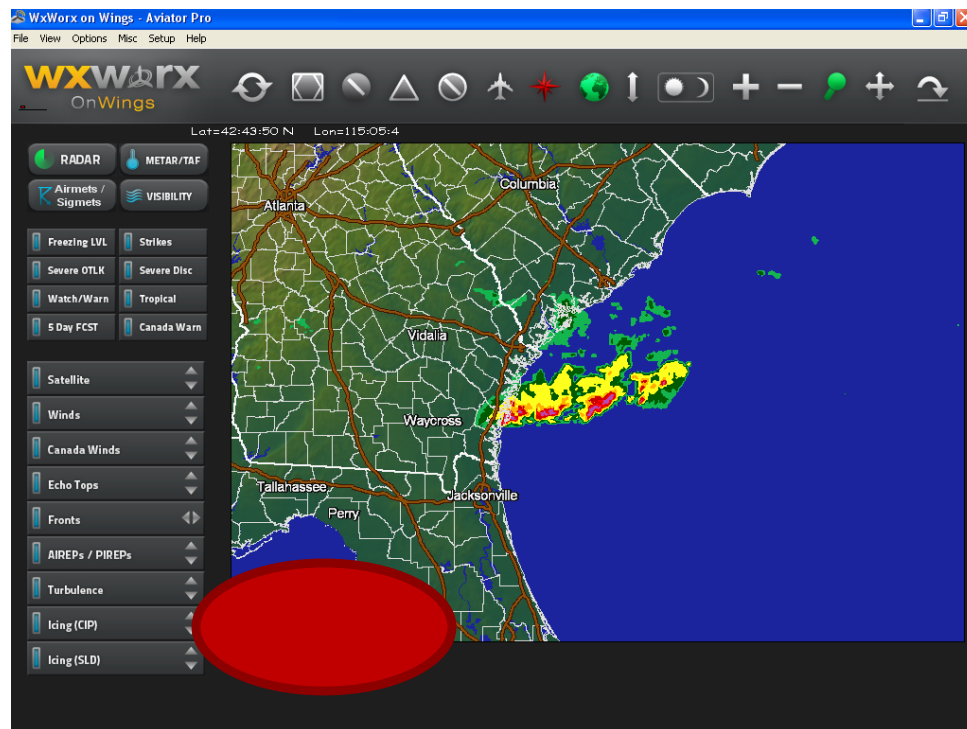


# WHAT DOES THE RADAR TIMESTAMP REPRESENT?

- The timestamp represents the radar mosaic creation time.
- At mosaic creation time, the currently available data from each individual radar site is utilized to create the mosaic:
  - Individual radar site data can be current at mosaic creation or may be as old as 6 minutes (if radar is in precipitation mode) or 10 minutes (if radar is in clear air mode).
  - If radar site data is older than 15 minutes, it is not included in the mosaic creation.
- Mosaic creation, transmittal to XM, and transmission to XMWX receiver takes approximately 1 minute.

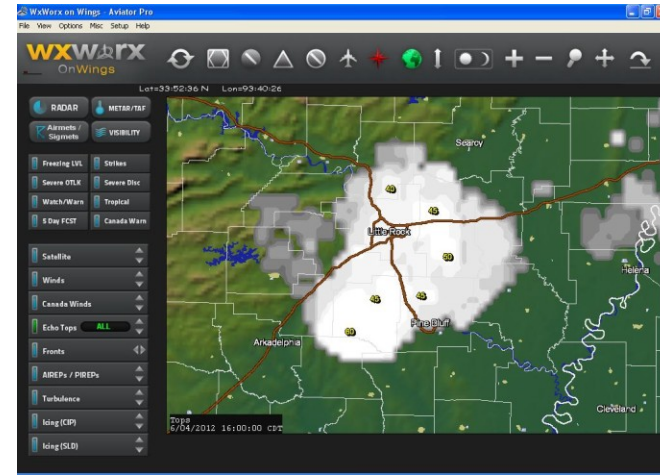
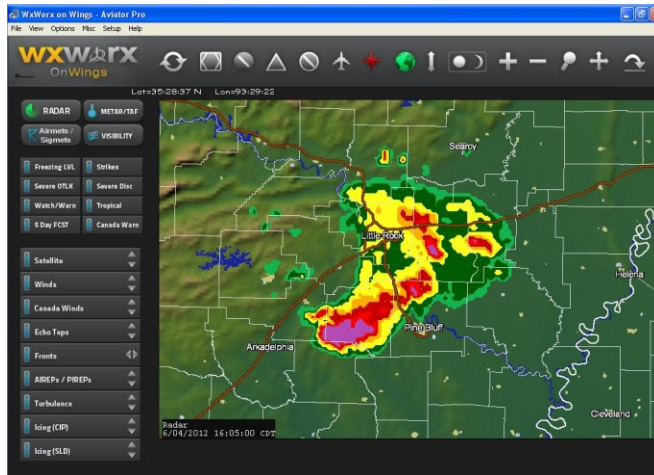
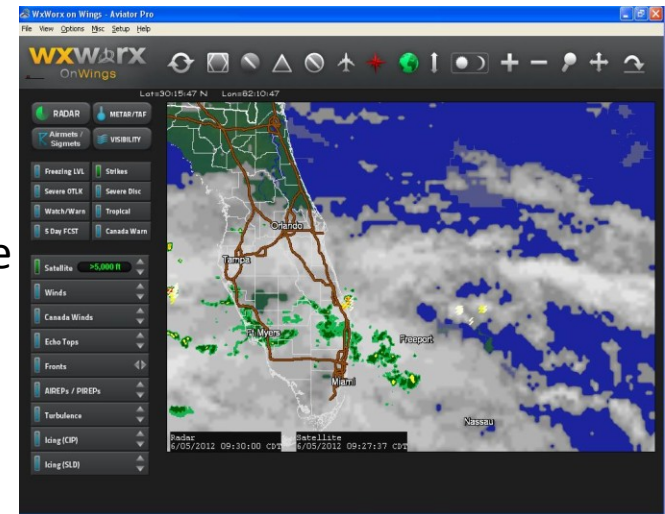
## Radar Latency Summary

During most weather events: Radar site data is 1-6 minutes older than mosaic timestamp



# OTHER USEFUL XMWX WEATHER AVOIDANCE PRODUCTS

- Lightning
  - Indication of storm severity
  - Indication of storm growth or decay
  - Beneficial detecting storms beyond radar coverage
  - Updated every 5 minutes at 4km resolution
- Echo Tops (Height of radar echoes > 18 dbz)
  - Indication of the height of storm cells
  - Lapse provides indication of storm growth or decay
  - Updated every 7.5 minutes at 2km resolution





# Questions

